

What is claimed is:

1. An drug delivery dressing comprising:

at least one fluid control film component comprising at least one microstructure-bearing surface having one or more channels therein that permit directional control of the liquid; and

5 a fluid source containing at least one medicament in fluid communication with the fluid control film component;

wherein the drug delivery dressing is configured for delivery of the medicament to skin.

- 10 2. The drug delivery dressing of claim 1 wherein the fluid control film component comprises a structured adhesive layer.

- 15 3. The drug delivery dressing of claim 1 wherein the fluid control film component comprises a backing layer.

4. The drug delivery dressing of claim 1 further comprising an adhesive layer adjacent to at least a portion of the fluid control film.

- 20 5. The drug delivery dressing of claim 4 further comprising a backing layer adjacent to at least a portion of the fluid control film component.

6. The drug delivery dressing of claim 5 wherein the fluid control film comprises a component separate from the adhesive layer and separate from the backing layer.

- 25 7. The drug delivery dressing of claim 1 wherein the fluid control film component comprises two or more microstructure-bearing surfaces, each surface having one or more channels therein that permit directional control of the liquid.

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8. The drug delivery dressing of claim 7 wherein the fluid control film component comprises a film having two microstructure-bearing surfaces, each surface having one or more channels therein that permit directional control of the liquid.

5 9. The drug delivery dressing of claim 8 further comprising pores in the fluid control film providing fluid communication between the two microstructure-bearing surfaces.

10. The drug delivery dressing of claim 7 wherein the fluid control film component comprises a plurality of fluid control films.

11. The drug delivery dressing of claim 1 providing fluid transport substantially orthogonal to the plane of the microstructure-bearing surface.

12. The drug delivery dressing of claim 1 wherein the medicament comprises an antimicrobial, an antibiotic, a drug, an analgesic, a healing factor, a vitamin, a growth factor, or a nutrient.

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